AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) An image pickup apparatus, comprising:

a solid-state image pickup device having high-sensitivity pixels and low-sensitivity pixels, a photometric characteristic of an output of the high-sensitivity pixels being different from that of the low-sensitivity pixels, wherein

the high-sensitivity pixels have a first high-sensitivity exposure value range in which they function before becoming saturated and a second high-sensitivity exposure value range in which they function before becoming saturated and no exposure value in the first high-sensitivity exposure value range overlaps with an exposure value in the second high-sensitivity exposure value range,

the low-sensitivity pixels have a first low-sensitivity exposure value range in which they function before becoming saturated and a second low-sensitivity exposure value range in which they function before becoming saturated and no exposure value in the first low-sensitivity exposure value range overlaps with an exposure value in the second low-sensitivity exposure value range,

the exposure value at which the low-sensitivity pixels begin to function in the first low-sensitivity exposure value range coincides with

the exposure value at which the high-sensitivity pixels become saturated in

the first high-sensitivity exposure value range, and

the exposure value at which the low-sensitivity pixels begin to

function in the second low-sensitivity exposure value range coincides with

the exposure value at which the high-sensitivity pixels become saturated in

the second high-sensitivity exposure value range;

control means for (i) calculating an exposure value based on values of signal

detected by said high-sensitivity pixels operating in the first high-sensitivity exposure

value range and values of signal detected by said low-sensitivity pixels operating in the

first low-sensitivity exposure value range, which are output from said solid-state image

pickup device in a first single instance of photometry, and (ii) when a correct exposure

value cannot be obtained in the first single instance of photometry due to saturation of

both the high-sensitivity pixels and the low-sensitivity pixels, calculating an exposure

value based on values of signal detected by said high-sensitivity pixels operating in the

second high-sensitivity exposure value range and values of signal detected by said low-

sensitivity pixels operating in the second low-sensitivity exposure value range, which are

output from said solid-state image pickup device in a second subsequent single instance

of photometry, where during each of the first and second instance of photometry, aperture

and electronic shutter speed are not changed; and

signal processing means for reading data of an image picked up by said solid-state

image pickup device and processing according to the calculated exposure value.

2. (Currently Amended) An image pickup apparatus, comprising:

image pickup means for picking up a subject image;

received light quantity detecting means having high-sensitivity pixels and low-sensitivity pixels, a photometric characteristic of an output of the high-sensitivity pixels being different from that of the low-sensitivity pixels, wherein

the high-sensitivity pixels have a first high-sensitivity exposure value range in which they function before becoming saturated and a second high-sensitivity exposure value range in which they function before becoming saturated and no exposure value in the first high-sensitivity exposure value range overlaps with an exposure value in the second high-sensitivity exposure value range,

the low-sensitivity pixels have a first low-sensitivity exposure value range in which they function before becoming saturated and a second low-sensitivity exposure value range in which they function before becoming saturated and no exposure value in the first low-sensitivity exposure value range overlaps with an exposure value in the second low-sensitivity exposure value range,

the exposure value at which the low-sensitivity pixels begin to function in the first low-sensitivity exposure value range coincides with the exposure value at which the high-sensitivity pixels become saturated in the first high-sensitivity exposure value range, and

the exposure value at which the low-sensitivity pixels begin to function in the second low-sensitivity exposure value range coincides with

the exposure value at which the high-sensitivity pixels become saturated in

the second high-sensitivity exposure value range; and

control means for (i) calculating an exposure value based on signal showing

received light quantity detected by said high-sensitivity pixels operating in the first high-

sensitivity exposure value range and signal showing received light quantity detected by

said low-sensitivity pixels operating in the first low-sensitivity exposure value range,

which are output from said received light quantity detecting means device in a first single

instance of photometry, and (ii) when a correct exposure value cannot be obtained in the

first single instance of photometry due to saturation of both the high-sensitivity pixels

and the low-sensitivity pixels, calculating an exposure value based on values of signal

detected by said high-sensitivity pixels operating in the second high-sensitivity exposure

value range and values of signal detected by said low-sensitivity pixels operating in the

second low-sensitivity exposure value range, which are output from said solid-state

image pickup device in a second subsequent single instance of photometry, and

controlling said image pickup means to pick up a subject image according to the exposure

value, where during each of the first and second instance of photometry, aperture and

electronic shutter speed are not changed.

3. (Currently Amended) A photometer which calculates a exposure value of the

image pickup apparatus, comprising:

received light quantity detecting means having high-sensitivity pixels and low-

sensitivity pixels, a photometric characteristic of an output of the high-sensitivity pixels

being different from that of the low-sensitivity pixels, wherein

the high-sensitivity pixels have a first high-sensitivity exposure value range in which they function before becoming saturated and a second high-sensitivity exposure value range in which they function before becoming saturated and no exposure value in the first high-sensitivity exposure value range overlaps with an exposure value in the second high-sensitivity exposure value range,

the low-sensitivity pixels have a first low-sensitivity exposure value range in which they function before becoming saturated and a second low-sensitivity exposure value range in which they function before becoming saturated and no exposure value in the first low-sensitivity exposure value range overlaps with an exposure value in the second low-sensitivity exposure value range,

the exposure value at which the low-sensitivity pixels begin to function in the first low-sensitivity exposure value range coincides with the exposure value at which the high-sensitivity pixels become saturated in the first high-sensitivity exposure value range, and

the exposure value at which the low-sensitivity pixels begin to function in the second low-sensitivity exposure value range coincides with the exposure value at which the high-sensitivity pixels become saturated in the second high-sensitivity exposure value range; and

calculating means for (i) calculating the exposure value based on signal showing received light quantity detected by said high-sensitivity pixels operating in the first high-sensitivity exposure value range and signal showing received light quantity detected by

said low-sensitivity pixels operating in the first low-sensitivity exposure value range,
which are output from the received light quantity detecting means device in a first single
instance of photometry, and (ii) when a correct exposure value cannot be obtained in the
first single instance of photometry due to saturation of both the high-sensitivity pixels
and the low-sensitivity pixels, calculating an exposure value based on values of signal
detected by said high-sensitivity pixels operating in the second high-sensitivity exposure
value range and values of signal detected by said low-sensitivity pixels operating in the
second low-sensitivity exposure value range, which are output from said solid-state
image pickup device in a second subsequent single instance of photometry, where during
each of the first and second instance of photometry, aperture and electronic shutter speed
are not changed.

Claims 4 – 6 (Canceled)

7. (Previously Presented) The image pickup apparatus of claim 1, wherein each
pixel includes a high-sensitivity pixel and a low-sensitivity pixel.

8. (Previously Presented) The image pickup apparatus of claim 2, wherein each
pixel includes a high-sensitivity pixel and a low-sensitivity pixel.

9. (Previously Presented) The photometer of claim 3, wherein each pixel includes
a high-sensitivity pixel and a low-sensitivity pixel.